



THERMAFIBER® Safing Insulation

UL- and OPL-labeled* safing insulation for firestops and fire-containment systems

- Firestop product for curtain wall fire and smoke containment systems, floor and wall penetrations, head-of-wall, and other construction joint systems.
- Fire resistant and noncombustible.
- Economical; installs quickly and easily.
- Aids sound control in many assemblies.
- Available in unfaced felt (plain) or with a tough scrim-reinforced foil facing (FSP).
- Durable; nondeteriorating and noncorrosive.

Description

THERMAFIBER® Safing Insulation is a mineral-wool-type insulation that resists temperatures up to 2,000 °F (1,093 °C), thus offering superior fire protection in a wide variety of fire-rated applications. It is a UL- and OPL-labeled product especially intended for tested UL and OPL Designs, as well as many other fire- and smoke-tested assemblies. This product is noncombustible per Standard NFPA 220 when tested in accordance with ASTM E 136, and moisture-resistant, noncorrosive, nondeteriorating, mildew-proof and vermin-proof. It permits dry construction for all-year-round work. Also, THERMAFIBER Safing Insulation is available plain, or with scrim-reinforced foil facing (FSP) that serves as a vapor retarder and/or smoke barrier.

THERMAFIBER Safing Insulation is compatible with both THERMAFIBER® Curtain Wall CW Insulations and THERMAFIBER FIRESpan™ Insulations.

Perimeter Fire Containment, Penetrations and Construction Joints

THERMAFIBER Safing Insulation is a key element in a wide variety of fire-tested construction assemblies. It is used with THERMAFIBER Curtain Wall and FIRESpan Insulations in applications to contain both fire and smoke to the area of origin. Especially for mid- and high-rise buildings, where fire and smoke must be prevented from spreading to the next floor. Since the floor assembly is typically fire-rated, one route for the fire spread is through and up the exterior curtain wall system. THERMAFIBER Safing Insulation is also used in conjunction with various sealants and caulks, in wall and floor penetration (poke-through) applications, head-of-wall construction joints, and other construction joints.

It is important to note that one of the most valuable yet misunderstood applications of THERMAFIBER Safing Insulation is its use in exterior curtain wall assemblies to safe-off the opening between concrete floor slabs and the curtain wall assemblies. Many people still believe the myth that all thermal insulations are the same when used in the curtain wall spandrel panels as long as THERMAFIBER Safing Insulation is used in the assembly. This is simply not true. Actual fire tests have proven that low-melt-point insulations, such as glass fiber types, will disintegrate quickly once exposed to fire, leaving the curtain wall unprotected. Then, as the now-unprotected curtain wall disintegrates or falls away, the safing insulation will no longer be supported, and the fire will spread to the floor(s) above. Effective perimeter fire containment can only be achieved when a fire-compatible product with the ability to resist high temperatures (such as THERMAFIBER Curtain Wall Insulations or THERMAFIBER FIRESpan Insulations) is used in conjunction with the THERMAFIBER Safing Insulation, acting together as a system. (See TF685, TF686 and TF871 for additional information).

Installation

Perimeter Installation

In curtain wall fire-containment applications, THERMAFIBER Safing Insulation fills the void between the slab edge and the curtain wall insulation to contain fire. Foil-faced insulation impedes the passage of smoke and noxious gases. Install THERMAFIBER Safing Insulation, of proper width (2" to 8" max. opening), compression fit in safe-off area (foil side up, if required) between THERMAFIBER FIRESpan or CW Curtain Wall Insulation and floor slabs, on safing "Z" clips spaced as required in the design (24" or 12" o.c. maximum), leaving no voids. Compression fitting the safing insulation is critical to assuring a tight seal. See specific test description for proper installation details. Install proper topping material, such as THERMAFIBER SMOKE SEAL Compound, or other approved smoke sealants as indicated in the specific test description or architectural specification.

Penetration Application

THERMAFIBER Safing Insulation provides a noncombustible, fire-resistant forming/packing material for many types of penetrations in walls and floor/ceilings. In all poke-through penetrations, clean substrate of dirt, dust, grease, oil, efflorescence, loose material or other matter. With a serrated knife, cut THERMAFIBER Safing Insulation slightly wider than the opening. Compress and tightly fit the minimum thickness and density of insulation required (per system specification) completely around penetrant. For floor slab openings, compress or install THERMAFIBER Safing Insulation according to details indicated in the specific test description or architectural specification to seal completely around cables, ducts, piping or other utilities.

Construction Joint Application

THERMAFIBER Safing Insulation is also used as a forming material in head-of-wall, floor to floor, floor to wall, and wall to wall construction joints. It is compressed and slid into joint openings to completely fill the gap between the intersection of the walls, floor, etc.

* UL is an abbreviation for Underwriters Laboratories Inc.; OPL is an abbreviation for Omega Point Laboratories, Inc.

Technical Data**Surface Burning Characteristics (According to ASTM E 84)****Product Designation**

Safing, Regular (Unfaced)
Safing (Foil-Faced)

Flame Spread

0
25

Smoke Developed

0
0

Products have a class A interior finish rating per NFPA 101, life safety code.

Product Density

Product Designation	Actual Density	Density Tolerance-pcf ⁽¹⁾
Safing	4.0	-0.5 +1.0
Safing	6.0	-0.75 +2.0
Safing	8.0	-1.0 +2.0

(1) On packaging weight basis.

Minimum Thickness
1"
1-1/2"
1"

Application Method

safing clips and/or compression fit
safing clips and/or compression fit
safing clips and/or compression fit

For the most up-to-date technical data, please refer to our website at www.thermafiber.com

Product Data**Standards Compliance**

THERMAFIBER Safing Insulation meets the following:



ASTM C 665 - Federal Specification HH-I-521F–Safing insulation as Types I and III, Class A, Category 1.

ASTM C 612-00 - Federal Specification HH-I-558B–Safing insulation as Types IA, IB and II.

ASTM E 136 - Rated noncombustible as defined by NFPA Standard 220 when tested according to ASTM E 136.

ASTM E 814 or UL 1479 - Safing insulation used in conjunction with SMOKE SEAL Compound, or other approved material in through - penetration firestop systems.

UL 2079 - Safing insulation used in conjunction with various sealants and caulks in construction joint systems.

ASTM C 553 - THERMAFIBER Insulations absorb less than 1% moisture by weight and volume.

Safing insulation products are approved by: **New York City Board of Standards & Appeals**– 39-74-SM & MEA 209-82-M, Vol. II.

Composition and Materials

THERMAFIBER blankets are a mineral fiber material manufactured from blast furnace slag, a by-product of iron ore reduction, and naturally occurring rock. THERMAFIBER blankets contain greater than 80% post-industrial recycle content. This product contains No Asbestos.

Warranty

System performance following substitution of materials or compromise in assembly design cannot be certified and may result in failure of fire performance under certain conditions. Products and systems provided by Thermafiber Inc. are warranted to be free from defects in material workmanship. Contact Thermafiber Inc. for complete warranty details.

Storage

Store in a cool, dry place.

Submittal Approvals:**Job Name****Contractor****Date****Trademarks**

THERMAFIBER, FIRESpan and THE NAME IN MINERAL WOOL are trademarks of Thermafiber Inc. SMOKE SEAL is a trademark of United States Gypsum Company.

Note

Products described here may not be available in all geographic markets. Consult your local sales office or representative for information.

Notice

THERMAFIBER INC. shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. THERMAFIBER'S liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing within thirty (30) days from date it was or reasonably should have been discovered.

Safety First!

Follow good safety and industrial hygiene practices while handling and installing products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.

Health Aspects

Information about health aspects of using THERMAFIBER® Curtain Wall Insulation products are thoroughly explained in North American Insulation Manufacturers Association's (NAIMA) Health and Safety facts for rock and slag wool insulation document #63. Contact Thermafiber, Inc. for more details.



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www.thermafiber.com





MSDS No.: 270
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Product name:

Mineral wool

Description:

Synthetic vitreous fiber

Supplier:

Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121

Emergency # (Chem-Trec.):

1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number: P	EL:	TLV:	STEL:
Slag wool fiber	65997-17-3	NE	1 fiber / cc	NE
Phenolic resin	09003-35-4	NE	NE	NE
Polyvinyl alcohol	09002-89-5	NE	NE	NE

Abbreviations: **PEL** = OSHA Permissible Exposure Limit. **TLV** = ACGIH Threshold Limit Value. **STEL** = Short Term Exposure Limit. **NE** = None Established. **NA** = Not Applicable.

PHYSICAL DATA

Appearance:	2' x 4' x 4" sheets.	Odor:	Negligible.
Boiling Point:	Not applicable.	Vapor Pressure:	Not applicable.
Melting Point:	Approx. 2400° F	VOC Content:	Not applicable.
Evaporation Rate:	Not applicable.	Solubility in Water:	Insoluble.
pH:	Not applicable.	Specific Gravity:	Not determined.

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable. Flammable Limits: Not applicable.
Extinguishing Media:	As appropriate for surrounding fire; material does not burn.
Special Fire Fighting Procedures:	Soak cartons to help prevent the spread of fire. Use a self-contained breathing apparatus when fighting fires involving chemicals.
Unusual Fire and Explosion Hazards:	None known.

REACTIVITY DATA

Stability:	Stable.	Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong acids.		
Hazardous Decomposition Products:	Thermal decomposition products can be formed at temperatures exceeding 2000° F. Thermal decomposition can yield CO and CO ₂ .		
Conditions to Avoid:	None known.		

HEALTH HAZARD DATA

Known Hazards:	Acute: Eye, skin and respiratory irritation. Chronic: Respiratory impairment.
Routes of Exposure:	Inhalation, Dermal.
Signs and Symptoms of Exposure:	Eyes: Mechanical irritation. Skin: Itching, irritation. Inhalation: Nose, throat and upper respiratory tract irritation.
Carcinogenicity:	Slag wool has been classified by the IARC as Group 3 – Unclassifiable as to Carcinogenicity in Humans.
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.

INTRODUCTION

APPLICATIONS / PRODUCTS

SYSTEM DETAILS

ESTIMATING TABLES / TECH DATA

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EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water while holding eyelids apart. Avoid rubbing the eyes as mechanical abrasions can occur. Call a physician if symptoms persist.
Skin:	Wash with soap and water. Launder clothing before reuse.
Inhalation:	Move to fresh air.
Ingestion:	No ill effects expected.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety goggles recommended to prevent particulates from irritating the eyes.
Skin Protection:	Cloth gloves and long sleeves to protect skin from irritating fibers.
Respiratory Protection:	Use local exhaust and/or a NIOSH-approved dust respirator when air movement is inadequate to control dusts / fibers below recommended exposure levels.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Avoid generating dusts. Local exhaust may be required to control dusts if power tools are used for cutting / trimming. Wear appropriate personal protective equipment. Store away from moisture; keep dry.
Spill Procedures:	Not applicable.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 0, Reactivity 0, PPE B (Gloves, Goggles)
DOT Shipping Name:	Not regulated.
IATA / ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product does not contain any toxic chemicals which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste.
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	Technical Service:	1 800 879 8000
Health / Safety:	1 800 879 6000 Jerry Metcalf (x6704)		
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.

CERTIFICATE OF COMPLIANCE

CERTIFICATE NUMBER: 20040809-R10905

ISSUE DATE: August 9, 2004

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Issued to: Thermafiber Inc.
3711 W Mill St Ext
Wabash, IN 46992

Report Reference: R10905


**This is to Certify that
representative samples of:** Forning Material, designated as Type SAF mineral wool batts.

**Have been investigated by Underwriters Laboratories Inc.® in accordance with the Standard(s) indicated
on this Certificate.**

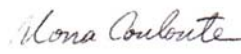
Standard(s) for Safety: ANSI/UL 1479, Fire Tests of Through-Penetration Firestops. ANSI/UL 2079,
Test for Fires Resistance of Building Joint Systems. ASTM E2307-04, Standard
Test Method for Determining Fire Resistance of Perimeter Fire Barrier Systems
Using Intermediate-Scale, Multi-story Test Apparatus


Additional Information: Type SAF mineral wool batts for use as a forming material for use in various
Through-Penetration FireStop Systems, Joint Systems and Perimeter Fire Barrier
Systems as Specified in UL's Fire Resistance Directory Volume 2.

**Only those products bearing the UL Classification Marking should be considered as being
covered by UL's Classification and Follow-Up Service.**

The UL Classification Marking includes: UL in a circle symbol:  with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and, the product category name (product identity) as indicated in the appropriate UL Directory.

LOOK FOR THE UL CLASSIFICATION MARKING ON THE PRODUCT!

Engineer:
Mona Couloute 
Underwriters Laboratories Inc.

Review Engineer: 
Chris Johnson
Underwriters Laboratories Inc.

